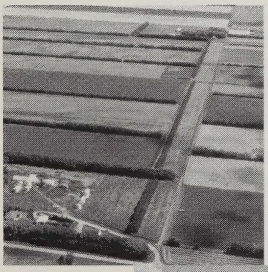
Greencover Canada
Forage Selection Guide



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— Who should use this guide? —

You should use this guide if you are a Canadian producer who is planning to apply for funding under Greencover Canada's Land Conversion component. This guide describes the criteria you need to follow for selecting both tame and native forage plants for perennial cover.

By using the plants listed in this guide, you will meet the conservation objectives of the Greencover Canada program. For more details on seeding long-lived perennials, contact your local soil conservationist, extension, rangeland, or forage specialist, or call Greencover Canada toll-free at **1 866 844-5620**.

— Using long-lived forage species —

To comply with the Greencover Canada program, you must use seed mixtures made up predominantly of long-lived forage species that offer economic and conservation benefits.

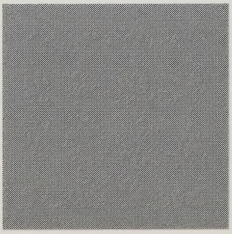
What types of seed should you use?

We strongly encourage you to use certified seed, although the minimum requirement is Common No. 1 or its equivalent standard for non-graded native forages. Certified seed provides a high standard in terms of germination and purity. Using certified seed improves your success in establishing the stand, and ensures it will meet your long-term goals with a minimum risk of weed problems.

Before you buy the seed, be sure to request a Certificate or Report of Seed Analysis from your seed retailer. This document, which provides information on the type and amount of problem weed seeds in the seed batch, must be submitted when you request payment for the seeding. To qualify for the program, the seed must also be free of downy brome and Japanese brome.

Seeding forages

It is critical that you remove any pre-existing vegetation before you seed, since it will compete with the new plants for light, moisture, and nutrients. Because weed seeds will continue to



germinate while the desired vegetation is establishing, you should spray or mow to control the weeds until the seeded plants dominate the site.

We recommend using seeding equipment, such as air drills or double-disc press drills, since they provide good seed-to-soil contact and accurate seeding depth control, which is crucial for good germination. Agitating seeds in a seed box or using a carrier will help prevent sorting, and will facilitate an even flow of various-sized seeds.

We strongly discourage you from using cover crops with forages, since they compete for light, moisture, and nutrients. We also recommend seeding into stubble, which will help prevent seed loss and topsoil erosion until you have established a sufficient cover of the seeded species.

— Choosing tame forages —

Ensuring longevity

The tame forage species listed in Tables 1 and 2 on pages 6 and 7 of this guide can survive for 10 years if you use the management practices outlined in your province's forage guide. Be sure to select a species variety that will survive 10 years. Keep in mind, however, that some species, such as alfalfa, have varieties that will not survive 10 years.

In some situations, however, you may have to include short-lived species. In saline lands, for example, it may be desirable to use a quick and easy establishing species, such as slender wheatgrass. Make sure your seed mixture does not include more than 25% by seed number of these short-lived species. Higher rates will result in a forage stand that is less dense than desirable, once the short-lived species decline.

What is the right forage mix for you?

We recommend using mixtures of grass and legume species. This combination will improve the stand's longevity and diversity, as well as the nitrogen status of the soil. Although you can use more complex mixtures, they become difficult to manage in terms of

harvest timing and selective grazing by livestock.
However, in some situations, we encourage you to use complex mixtures. For example, in areas with variable levels of salinity, we recommend you use a mixture of species that can adapt to a range of salinity levels. Diverse mixtures also produce more consistent forage throughout the growing season, and may make more efficient use of nutrients and moisture. Consider a species combination that will meet both the conservation objectives of the program and your own goals.

Avoid using invasive species

Invasive agronomic species, such as smooth brome grass and crested wheatgrass, are important in some forage-production systems because of their ability to establish, produce and survive, and because they can spread beyond the original seeding area.

However, because of this ability to spread, we recommend that you do not seed any invasive agronomic species within 0.75 kilometres (0.5 miles) of existing native rangeland. Given the limited acreage of native rangeland in Canada, this measure will help us to conserve this valuable resource.

— Choosing native forages —

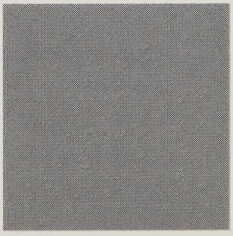
What are the advantages?

Native plants are well-adapted to climate, soil and disturbances such as grazing. As a result, they will become stable, long-term perennial cover with minimal input from you.

Many livestock producers find that native and tame vegetation complement each other very well. Native vegetation provides more diversity in forage selection and can provide more balanced forage production and quality during the growing season.

The risks of planting native forages

Native seed is more expensive than most tame species because it can be difficult to produce, and because supplies are limited. In addition, information and technology specific to planting native forages is generally less available than tame forages.



Although these guidelines will help improve your success, there is still much to learn about establishing native forages. As a result, there is some risk that your native forage may be slow to establish, or in some instances may completely fail. When this happens, you may need to replant the stand.

You can reduce the risks associated with planting native forages by discussing your plan with a designated specialist at Greencover Canada. For more information, call **1 866 844-5620**.

Note: Although Greencover Canada provides extra financial support for native forages to help offset the inherent costs and risks, the program will not pay for reseeding.

Selecting the right native seed mixture

By seeding species that are adapted to the environmental variations of your site, you will help to ensure your perennial cover is successful in the long term. Table 2 on page 7 provides a few examples of common native forages for each region of Canada. Please note that it is not a complete list of eligible native species.

We recommend that you seed your site with a minimum of three native species. To determine which species are best suited to your site, you must work in consultation with a designated specialist. Call Greencover Canada at **1 866 844-5620** to contact your nearest designated specialist.

We recommend that a legume be included in the mixture to help add nitrogen to the soil, which will improve the stand's longevity. Up to 5% of the mix by seed number can contain a non-native legume (the exception is sweet clover, due to its tendency to spread), since native legumes are not readily available.

Using a quick-establishing native species may be beneficial because many native plants are slow to establish. However, a seed mix should comprise no more than 25% by seed number of short-lived, aggressive species. In many cases, 10% or less will meet your objectives. This will ensure short-lived species will not dominate the stand and prevent long-lived species from establishing. You can also include different vegetation forms, such as trees, shrubs, and native wildflowers.

— For more information —

For more details on the Greencover Canada program, visit our Web site at **http://www.agr.gc.ca/greencover-verdir**, or call us at **1 866 844-5620**.

TABLE 1

LONG-LIVED TAME FORAGES FOR USE IN THE GREENCOVER CANADA PROGRAM

Species	BC Central	Prairies and BC Peace Region				Ontario	Quebec	Atlantic
		Brown	Dark Brown	Black	Gray Wooded			
Alfalfa	✔	✔	✔	✔	✔	✔	✔	
Altai Wild Rye		✔	✔					
Birdsfoot Trefoil				✔	✔	✔	✔	✔
Cicer Milkvetch				✔	✔			
Creeping or Meadow Foxtail				✔	✔			
Creeping Red Fescue				✔	✔	✔	✔	✔
Crested Wheatgrass		✔	✔	✔	✔			
Kentucky Bluegrass				✔	✔			
Meadow Bromegrass	✔	✔	✔	✔	✔	✔	✔	✔
Kura Clover						✔	✔	✔
Orchard Grass	✔					✔	✔	✔
Reed Canary Grass	✔			✔	✔	✔	✔	✔
Russian Wild Rye		✔	✔					
Sainfoin		✔	✔	✔				
Smooth Bromegrass	✔	✔	✔	✔	✔	✔	✔	✔
Tall Fescue	✔			✔	✔	✔	✔	✔
Tall Wheatgrass				✔	✔			
Timothy	✔			✔	✔	✔	✔	✔
White Clover	✔			✔	✔	✔	✔	✔

TABLE 2

SOME COMMON NATIVE FORAGES FROM EACH REGION OF CANADA

SPECIES	BC	BC and AB	Prairies and BC Peace Region				ON and QC
	Inter-mountain	Rocky Mountain Foothills	Brown-Dark Brown (Mixed Prairie)	Black (Fescue Prairie)	Black (Tallgrass Prairies)	Gray Wooded (Boreal Forest)	Southern
Bluebunch Wheatgrass	✔						
Foothills Rough Fescue	✔	✔					
Idaho Fescue	✔	✔					
Sandberg's Blue Grass	✔		✔				
American Vetch		✔		✔		✔	
Hairy Wild Rye		✔					
Richardson's Needle Grass		✔					
Blue Grama Grass			✔				
Green Needle Grass			✔	✔	✔		
Needle and Thread Grass			✔				
Northern & Western Wheatgrass			✔				
Slender Wheatgrass			✔	✔			
Western Porcupine Grass			✔	✔			
Awned Wheatgrass				✔		✔	
Peavine				✔		✔	
Plains Rough Fescue				✔			
Big Bluestem					✔		✔
Little Bluestem					✔		✔
Porcupine Grass					✔		
Sand Dropseed					✔		
Fringed Brome						✔	
Purple Oat Grass						✔	
White-Grained Mountain Rice Grass						✔	
Indian Grass							✔
Switch Grass							✔

Note: This table is intended to provide examples of native forages but is not a complete list of eligible species. Please contact a designated specialist for more information.
Significant areas of native forages are uncommon in the south coastal region of British Columbia, northern Quebec and Ontario, and the Atlantic provinces.